# Artificial intelligence in South Africa comes with special dilemmas—plus the usual risks

January 27 2023, by Emile Ormond



Credit: AI-generated image (disclaimer)

When people think about artificial intelligence (AI), they may have visions of the future. But AI is already here. At its base, it is the recreation of aspects of human intelligence in computerized form. Like human intelligence, it has wide application.

Voice-operated personal assistants like Siri, self-driving cars, and text and image generators all use AI. It also curates our social media feeds. It helps companies to detect fraud and hire employees. It's used to manage livestock, enhance crop yields and aid medical diagnoses.

Alongside its growing power and its potential, AI raises moral and ethical questions. The technology has already been at the center of multiple scandals: the infringement of laws and rights, as well as racial and gender discrimination. In short, it comes with a litany of ethical risks and dilemmas.

But what exactly are these risks? And how do they differ among countries? To find out, I undertook a thematic review of literature from wealthier countries to identify six high-level, universal ethical risk themes. I then interviewed experts involved in or associated with the AI industry in South Africa and assessed how their perceptions of AI risk differed from or resonated with those themes.

The findings reflect marked similarities in AI risks between the global north and South Africa as an example of a global south nation. But there were some important differences. These reflect South Africa's unequal society and the fact that it is on the periphery of AI development, utilization and regulation.

Other developing countries that share similar features—a vast digital divide, high inequality and unemployment and low quality education—likely have a similar risk profile to South Africa.

Knowing what ethical risks may play out at a country level is important because it can help policymakers and organizations to adjust their risk management policies and practices accordingly.

## Universal themes

The six universal ethical risk themes I drew from reviewing global north literature were:

- **Accountability**: It is unclear who is accountable for the outputs of AI models and systems.

- **Bias**: Shortcomings of algorithms, data or both entrench bias.

- **Transparency**: AI systems operate as a "black box". Developers and end users have a limited ability to understand or verify the output.

- **Autonomy**: Humans lose the power to make their own decisions.

- **Socio-economic risks**: AI may result in job losses and worsen inequality.

- **Maleficence**: It could be used by criminals, terrorists and repressive state machinery.

Then I interviewed 16 experts involved in or associated with South Africa's AI industry. They included academics, researchers, designers of AI-related products, and people who straddled the categories. For the most part, the six themes I'd already identified resonated with them.

## South African concerns

But the participants also identified five ethical risks that reflected South Africa's country-level features. These were:

- **Foreign data and models**: Parachuting data and AI models in

from elsewhere.

- **Data limitations**: Scarcity of data sets that represent, reflect local conditions.

- **Exacerbating inequality**: AI could deepen and entrench existing socio-economic inequalities.

- **Uninformed stakeholders**: Most of the public and policymakers have only a crude understanding of AI.

- **Absence of policy and regulation**: There are currently no specific legal requirements or overarching government positions on AI in South Africa.

## What it all means

So, what do these findings tell us?

Firstly, the universal risks are mostly technical. They are linked to the features of AI and have technical solutions. For instance, bias can be mitigated by more accurate models and comprehensive data sets.

Most of the South African-specific risks are more socio-technical, manifesting the country's environment. An absence of policy and regulation, for example, is not an inherent feature of AI. It is a symptom of the country being on the periphery of technology development and related policy formulation.

South African organizations and policymakers should therefore not just focus on technical solutions but also closely consider AI's socio-economic dimensions.

Secondly, the low levels of awareness among the population suggest there is little pressure on South African organizations to demonstrate a commitment to ethical AI. In contrast, organizations in the global north have to show cognisance of AI ethics, because their stakeholders are more attuned to their rights vis-à-vis digital products and services.

Finally, whereas the EU, UK and US have nascent rules and regulations around AI, South Africa has no regulation and limited laws relevant to AI.

The South African government has also failed to give much recognition to AI's broader impact and ethical implications. This differs even from other emerging markets such as Brazil, Egypt, India and Mauritius, which have national policies and strategies that encourage the responsible use of AI.

## Moving forward

AI may, for now, seem far removed from South Africa's prevailing socio-economic challenges. But it will become pervasive in the coming years. South African organizations and policymakers should proactively govern AI ethics risks.

This starts with acknowledging that AI presents threats that are distinct from those in the global north, and that need to be managed. Governing boards should add AI ethics to their agendas, and policymakers and members of governing boards should become educated on the technology.

Additionally, AI ethics risks should be added to corporate and government risk management strategies—similar to climate change, which received scant attention 15 or 20 years ago but now features prominently.

Perhaps most importantly, the government should build on the recent launch of the Artificial Intelligence Institute of South Africa, and introduce a tailored national strategy and appropriate regulation to ensure the ethical use of AI.

This article is republished from The Conversation under a Creative Commons license. Read the original article.

Provided by The Conversation

Citation: Artificial intelligence in South Africa comes with special dilemmas—plus the usual risks (2023, January 27) retrieved 6 May 2024 from https://techxplore.com/news/2023-01-artificial-intelligence-south-africa-special.html